and the modern agricultural know-how to farmers of backward areas and adivasis;

(b) whether there is any such scheme to train Adivasis of Orissa about modern agricultural know-how; and

(c) if so, the details thereof?

THE MINISTER OF STATE IN THE DEPARTMENT OF AGRICULTURE AND COOPERATION IN THE MINISTRY OF AGRICULTURE (SHRI YOGENDRA MAKWANA): (a) The benefits of irrigation and modern agricultural know-how are provided to farmers of backward areas and adivasis through a number of development schemes. The integrated water resources development scheme, including schemes in tribal and backward areas are planned and implemented by the State Governments. The tribal sub-plan approach, which aims at an area development of scheduled tribe concentrated areas is meant to specifically benefit the tribal farmers. In addition, the Central Ground Water Board is giving special attention for studying the possibilities of water resources development in tribal and backward areas.

For the transfer of modern agricultural know-how to the farmers, a programme of agricultural extension known as the Training and Visit system is being implemented in 17 states, including tribal and backward areas in these States. This scheme being implemented by the concerned state government provides for a large number of field extension staff who regularly visit the farmers and train them in modern agricultural technology. The transfer of agricultural technology is also achieved through the programmes run by the Indian Council of Agricultural Research, namely, National demonstrations, operational research projects, Krishi Vigyan Kendras, and lab. to land programme.

(b) and (c) In order to train the farmers of Orissa about the modern agricultural know-how, the training and visit system of extension was introduced in the State of Orissa since June, 1977. This project is in operation in all the 30 districts of the State including the backward areas and predominently adivasi districts. The modern agricultural technologies developed by the Orissa University of Agriculture and Technology are tested in 13 adaptive research centres, of which 9 are in the tribal areas, and are transferred to the farmers through the systematic training of the field extension workers in these technologies and the regular visit of the extension workers to the farmers' fields. These efforts are supplemented by exhibition, demonstrations, farm fairs, and farm related programmes through mass media.

There are also 5 Krishi Vigyan Kendras operating in Orissa out of which 3 are located in the adivasi districts of Keonjhar, Koraput and Ganjam. They train farmers, farm women and farm youth in agriculture and allied areas. There are also 3 scheduled tribe projects run by the Indian Council of Agricultural Research in the tribal districts of Koraput, Phulbani and Keonjhar.

The Integrated Rural Development Programme is being implemented in all the blocks of Orissa including tribal areas. Under this, the farmers are assisted in taking up modern agriculture through financial subsidies for investing in minor irrigation, land development and other agricultural activities. The pattern of subsidy is generally 25 per cent for small farmers, 33.3 per cent for marginal farmers, agricultural labourers and rural artisans and 50 per cent for tribal beneficiaries.

Research and development on agriculture with low water requirement

2402. SHRI CHIMANBHAI MEHTA: Will the Minister of AGRICULTURE be pleased to state:

(a) whether Government are aware of the latest research done in Israel and other countries in the fields of hydrophonics and other methods of agriculture where in minimum water

is needed and if so, what are the details thereof;

(b) whether Government propose to undertake research in this field and if so, the details thereof;

(c) whether Government also propose to adopt these methods or have already adopted and if so, what are the details thereof including the area covered by these innovative methods during the last three years; and

(d) what are the future programmes with regard to the research and development of agriculture with low water requirements, its budgetary allocations and other details?

THE MINISTER OF STATE IN THE DEPARTMENT OF AGRICULTURE AND COOPERATION IN THE MINISTRY OF AGRICULTURE (SHRI YOGENDRA MAKWANA): (a) Yes, Sir. Hydrophonics is a method of growing plants without soil in a nutrient solution, generally practised in some specific situations. We are aware of the research being done on this aspect in Israel and in some other countries for the cultivation of vegetables and ornamental plants. This system is in practice on a commercial scale where water is limiting. This technology is high input and high cost oriented besides being sophisticated.

(b) No, Sir. Not in the near future.

(c) It is not proposed to adopt these methods on any extensive scale.

(d) The Indian Council of Agricultural Research has launched several research programmes to develop technologies for crop production with limited water use. The research programme include (i) the establishment of a Central Research Institute for Dryland Agriculture at Hyderabad with the 7th Plan outlay of Rs. 138.60 lakhs; (ii) an All-India Coordinated Research Project on Dryland agriculture with an outlay of Rs. 458.81 lakhs for rainfed areas; (iii) an All-India Coordinated Research Project on Water Management with 26 centres for irrigated areas at an outlay of Rs. 430 lakhs. It is proposed to set up the Project Directorate for Water Managament research during the 7th plan. Through these research programmes, efforts are being made to increase water use efficiency and reduce water requirements through such methods as drip and sprinkler irrigation systems. In addition to these, the Water Technology centres at IARI and Coimbatore and the proposed one in the Eastern Region will also undertake similar programmes on efficient water use. In addition, the Department of Agriculture, Government of India has launched a centrally sponsored scheme of 'National Watershed Development Programme' for Rainfed Agriculture from July, 1986 till the end of 7th Five Year Plan at an outlay of Rs. 239 crores for the unirrigated arable lands.

'Q' Mark Pumpsets

2403. SHRI CHIMANBHAI MEHTA: Will the Minister of WATER RESOURCES be pleased to refer to answer to Unstarred Question No. 770 given in the Rajya Sabha on 31st July, 1987 and state:

(a) the details of appropriate mechanism for prevention and substandard production at each stage in case of ISI pumpsets;

(b) the detailed comparison between the quality control mechanism of ISI and 'Q' mark pumpsets;

(c) the names of the members of the working Group of National Level Standing Committee for improving the operational efficiency;

(d) the major details of the report of the working group; and

(e) whether the said working Group was asked to give their comments on the quality of 'Q' mark pumpsets manufactured by small scale industries of Gujarat; if so, what are the comments of the Group?